

Bibliography

- Arnold, Steven F. 1981. *The Theory of Linear models and Multivariate Analysis*. New York: John Wiley & Sons.
- Babaud, J., A. Witkin, and R.O. Duda. 1986. Uniqueness of the Gaussian kernel for scale-space filtering. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-8: 2-14.
- Blom, J. 1992. Topological and geometrical aspects of image structure. Ph.D. diss., Utrecht Univ., the Netherlands.
- Burt, Peter, and Edward Adelson. 1983. The laplacian pyramid as a compact image code. *IEEE Trans. Communications*. 31(4): 532-540.
- Chellappa, Rama, and Anil Jain. 1993. *Markov Random Fields*. San Diego, CA: Academic Press.
- Cromartie, Robert. 1995. Structure-sensitive contrast enhancement: development and evaluation. Ph.D. diss., Univ. of North Carolina at Chapel Hill, Dept. of Computer Science.
- Dempster, A. P., N. M. Laird, and D. B. Rubin. 1977. Maximum likelihood from incomplete data via the EM algorithm. *J. Royal Statistical Society*. 1977(1): 1-38.
- Duda, Richard O., and Peter E. Hart. 1973. *Pattern Classification and Scene Analysis*. New York: John Wiley & Sons.
- Eberly, David. 1993. *personal communication*.
- Eberly, David. 1994a. Geometric analysis of ridges in N-dimensional images. Ph.D. diss., Univ. of North Carolina at Chapel Hill, Dept. of Computer Science.
- Eberly, David. 1994b. A differential geometric approach to anisotropic diffusion. in *Geometry-Driven Diffusion in Computer Vision*, ed. B.M. ter Haar Romeny, 371-392. Dordrecht, the Netherlands: Kluwer.
- Florack, L.M.J. 1993. The syntactic structure of scalar images. Ph.D. diss., Utrecht Univ., the Netherlands.
- Florack, L.M.J., B.M. ter Haar Romeny, J.J. Koenderink, and M.A. Viergever. 1994a. General intensity transformations and differential invariants. *J. of Math. Imaging and Vis.* 4: 171-187.
- Florack, L.M.J., B.M. ter Haar Romeny, J.J. Koenderink, and M.A. Viergever. 1994b. Images: regular tempered distributions. in *Shape in Picture*, 651-659. Berlin: Springer-Verlag.

- Fritsch, D. 1993. Registration of radiotherapy images using multiscale medial descriptions of image structure. Ph.D. diss., Univ. of North Carolina at Chapel Hill, Dept. of Computer Science.
- Geiger, Davi, and Alan Yuille. 1991. A common framework for image segmentation. *Int. J. of Comp. Vis.* 6(3): 227-243.
- Geman S. and D. Geman. 1984. Stochastic relaxation, Gibbs distributions, and the Bayesian restoration of images. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-6: 721-741.
- Gerig, Guido, John Martin, Olaf Kubler, Ron Kikinis, Martha Shenton and Ferenc A. Jolesz. 1991. Automating segmentation of dual-echo MR head data. in *Proc. Int. Conf. Information Processing in Medical Imaging*, IPMI91, Wye, Kent, UK, July 1991; Lecture Notes in Computer Science, 511, ed. A.C.F. Colchester, D.J. Hawkes, 175-187. Berlin: Springer-Verlag.
- Gerig, Guido, Olaf Kubler, Ron Kikinis, and Ferenc A. Jolesz. 1992. Nonlinear anisotropic filtering of MRI data. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-11: 221-232.
- Griffin, L. D., A.C.F. Colchester, and G.P. Robinson. 1991. Scale and segmentation of grey-level images using maximum gradient paths. in *Proc. Int. Conf. Information Processing in Medical Imaging*, IPMI91, Wye, Kent, UK, July 1991; Lecture Notes in Computer Science, 511, ed. A.C.F. Colchester, D.J. Hawkes, 256-272. Berlin: Springer-Verlag.
- Gueziec, Andre and Nicholas Ayache. 1992. Smoothing and matching of 3-D space curves. *Visualization in Biomedical Computing* 1992, ed. Richard A. Robb. Proc. SPIE-1808: 259-273.
- Hu, Ming-Kuei. 1962. Visual pattern recognition by moment invariants. *IRE Trans. Information Theory*. IT-8(February): 179-187.
- Jain, Anil K. 1989. *Fundamentals of Image Processing*. Englewood Cliffs, NJ: Prentice Hall.
- Johnson, Norman L., Samuel Kotz. 1970. *Continuous Univariate Distributions - 1*. New York: John Wiley and Sons.
- Koenderink, J.J. 1984. The structure of images. *Biol. Cybernet* 50: 363-370.
- Koenderink, J.J. 1990. *Solid shape*. Cambridge, MA: MIT press.
- Koenderink, J.J., and A.J. van Doorn. 1987. Representation of local geometry in the visual system. *Biol. Cybern.*, 55:367--375.
- Laidlaw, David H. 1995. Geometric model extraction from magnetic resonance volume data. Ph.D. diss., California Institute of Technology, Pasadena, CA. May 1995.
- Lee, J.S. 1983. Digital image smoothing and the sigma filter. *Comp. Vision, Graphics, and Image Processing*. CVGIP-24: 255-269.
- Lindeberg, T. 1990. Scale-space for discrete signals. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-12: 234-254.

- Lindeberg, T. 1991. Discrete scale space theory and the scale space primal sketch. Ph.D. diss., Royal Institute of Technology, S-100 44 Stockholm, Sweden. May 1991.
- Lindeberg, T. 1994a. *Scale Space Theory in Computer Vision..* Dordrecht, the Netherlands: Kluwer.
- Lindeberg, T. and B.M. ter Haar Romeny. 1994b. Linear scale-space II: early visual operations. in *Geometry-Driven Diffusion in Computer Vision*, ed. B.M. ter Haar Romeny, 39-71. Dordrecht, the Netherlands: Kluwer.
- Mallat, Stephane. 1989. A theory for multiresolution signal decomposition: the wavelet representation. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-12: 674-693.
- Metz, C. 1969. A mathematical investigation of radioisotope scan image processing. Ph.D. diss., Univ. of Pennsylvania.
- Morse, Bryan S. 1994. Computation of object cores from grey-level images. Ph.D. diss., Univ. of North Carolina at Chapel Hill, Dept. of Computer Science.
- Morse B.S., S.M. Pizer, and A. Liu. 1993. Multiscale medial analysis of medical images. in *Proc. Int. Conf. Information Processing in Medical Imaging*, IPMI93, Flagstaff, AZ, USA, June 1993; Lecture Notes in Computer Science, 687, ed. H.H. Barrett, A.F. Gmitro, 112-131. Berlin: Springer-Verlag.
- Olver, P.J. 1993. *Applications of Lie Groups to Differential Equations, 2nd edition.* (1st ed. 1986) Berlin: Springer-Verlag.
- Olver, Peter, Guillermo Sapiro, Allen Tannenbaum. 1994. Differential invariant signatures and flows: a symmetry group approach. in *Geometry-Driven Diffusion in Computer Vision*, ed. B.M. ter Haar Romeny, 225-306. Dordrecht, the Netherlands: Kluwer.
- Papoulis, A. 1991. *Probability, Random Variables, and Stochastic Processes, 3rd edition.* New York: McGraw-Hill.
- Perona, P. and J. Malik. 1990. Scale-Space and edge detection using anisotropic diffusion. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-12: 629-639.
- Perona, P. 1992. Steerable-scalable kernels for edge detection and junction analysis. in *Proc. 2nd European. Conf. on Computer Vision*, Santa Margherita Ligure, Italy, May 1992. 3-18.
- Pizer, S.M., T.J. Cullip, and R.E. Frederickson. 1990. Toward interactive object definition in 3D scalar images. in *3D Imaging in Medicine*; NATO ASI Series, F60, ed. Karl Heinz Hohne, Henry Fuchs, and Stephen M. Pizer, 83-105. Berlin: Springer-Verlag.
- Pizer, S.M., E.P. Amburn, J.D. Austin, R. Cromartie, A. Geselowitz, B.M. ter Haar Romeny, and J.B. Zimmerman. 1987. Adaptive histogram equalization and its variations. *Comp. Vision, Graphics, and Image Processing.* CVGIP-35: 355-368.
- Press, W.H., B.P. Flannery, S.A. Teukolsky, and W.T. Vetterling. 1992. *Numerical Recipies in C; the Art of Scientific Computing, 2nd edition.* Cambridge, UK: Cambridge University Press.

- Reiss, T. H. 1991. The revised fundamental theorem of moment invariants. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-13: 830-834.
- Shah, J. 1991. Segmentation by nonlinear diffusion. in *Proc. Conf. on Computer Vision and Pattern Recognition*. CVPR91. 202-207.
- ter Haar Romeny, B.M. and L.M.J. Florack. 1991a. A multiscale geometric approach to human vision. in *Perception of Visual Information*, ed. B. Hendee and P. N. T. Wells, 73-114. Berlin: Springer-Verlag.
- ter Haar Romeny, B.M., L.M.J. Florack, J.J., Koenderink, and M.A. Viergever. 1991b. Scale space: its natural operators and differential invariants. in *Proc. Int. Conf. Information Processing in Medical Imaging*, IPMI91, Wye, Kent, UK, July 1991; Lecture Notes in Computer Science, 511, ed. A.C.F. Colchester, D.J. Hawkes, 239-255. Berlin: Springer-Verlag.
- ter Haar Romeny, B.M., L.M.J. Florack, A.H. Salden, and M.A. Viergever. 1993. Higher order differential structure in images. in *Proc. Int. Conf. Information Processing in Medical Imaging*, IPMI93, Flagstaff, AZ, USA, June 1993; Lecture Notes in Computer Science, 687, ed. H.H. Barrett, A.F. Gmitro, 77-93. Berlin: Springer-Verlag.
- Torre, V. and T.A. Poggio. 1986. On edge detection. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-8: 147-163.
- Weickert, Joachim. 1995. Multiscale texture enhancement. in *Proc. 6th Int. Conf. on Comp. Anal. of Images and Patt.* CAIP '95, Prague, Sep 1995. (Lecture Notes in Computer Science): Berlin: Springer-Verlag.
- Wells, W.M., W.E.L. Grimson, R. Kikinis, and F.A. Jolesz. 1994. In-vivo intensity correction and segmentation of magnetic resonance image data. In *Proc of Computer Vision in Medicine* (AAAI Spring Symposium Series, Stanford University, Palo Alto, CA). AAAI Technical Report SS-94-05. 186-190.
- Whitaker, Ross T. 1993a. Geometry-Limited Diffusion, . Ph.D. diss., Univ. of North Carolina at Chapel Hill, Dept. of Computer Science.
- Whitaker, Ross T. and Stephen M. Pizer. 1993b. A multi-scale approach to nonuniform diffusion, *CVGIP: Image Understanding*, 57(1);99-110, January 1993.
- Whitaker, Ross T. 1993c. Characterizing first and second order patches using geometry-limited diffusion. in *Information Processing in Medical Imaging* (Lecture Notes in Computer Science 687, H.H. Barrett and A.F. Gmitro, eds.): 149-167, Springer-Verlag, Berlin, 1993.
- Witkin, A. 1983. Scale-space filtering. in *Proc. Int.. Joint Conf. on Artif. Intell.*, Karlsruhe, Germany, Aug 1983, 1019-1022.
- Witkin, A. 1984. Scale-space filtering: a new approach to multi-scale description. in *Image Understanding 1984*, ed. S. Ullman, W. Richards, 79-95. Norwood, New Jersey: Ablex.

- Yoo, Terry S. and James M. Coggins, Using statistical pattern recognition to control variable conductance diffusion, *Information Processing in Medical Imaging* (Lecture Notes in Computer Science 687, H.H. Barrett and A.F. Gmitro, eds.): 495-471, Springer-Verlag, Berlin, 1993.
- Yoo, Terry S. 1994. Statistics and scale in variable conductance diffusion. In *Proc of Computer Vision in Medicine* (AAAI Spring Symposium Series, Stanford University, Palo Alto, CA). AAAI Technical Report SS-94-05. 186-190.
- Yuille, A. and T. A. Poggio. 1986. Scaling theorems for zero crossings. *IEEE Trans. Patt. Anal. Mach. Intell.* PAMI-8: 15-25.